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[54] **HATCH COVER**

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[52] **U.S. Cl.** ..... **114/201 R**; 49/501; 114/173

[58] **Field of Search** ..... 114/116, 117, 173, 177, 114/176, 178, 201 R–203, 335, 74 A; 49/381, 383, 400, 475, 483, 486, 501; 220/344, 378

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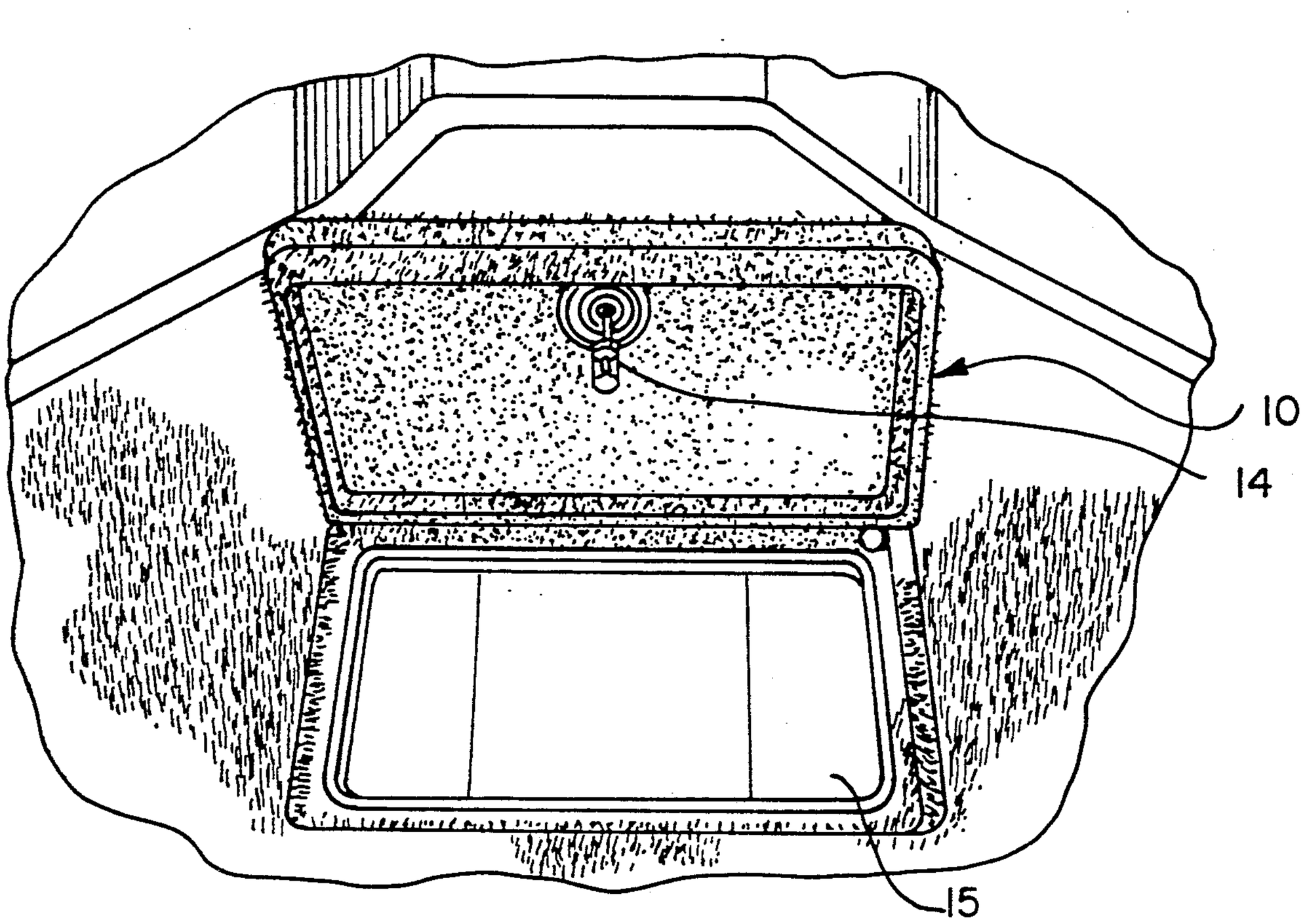
[57] **ABSTRACT**

A cover for a hatch includes a rigid main body member and a sealing member secured to the main body member. The sealing member is an expanded polyethylene foam; and it extends across the hatch and engages the portion of the structural member or deck adjacent the hatch. The sealing member, thus, seals the hatch and insulates the compartment below the hatch. It acts as a gasket seal for the cover, and provides sound dampening, corrosion protection, and other advantages.

9 Claims, 1 Drawing Sheet



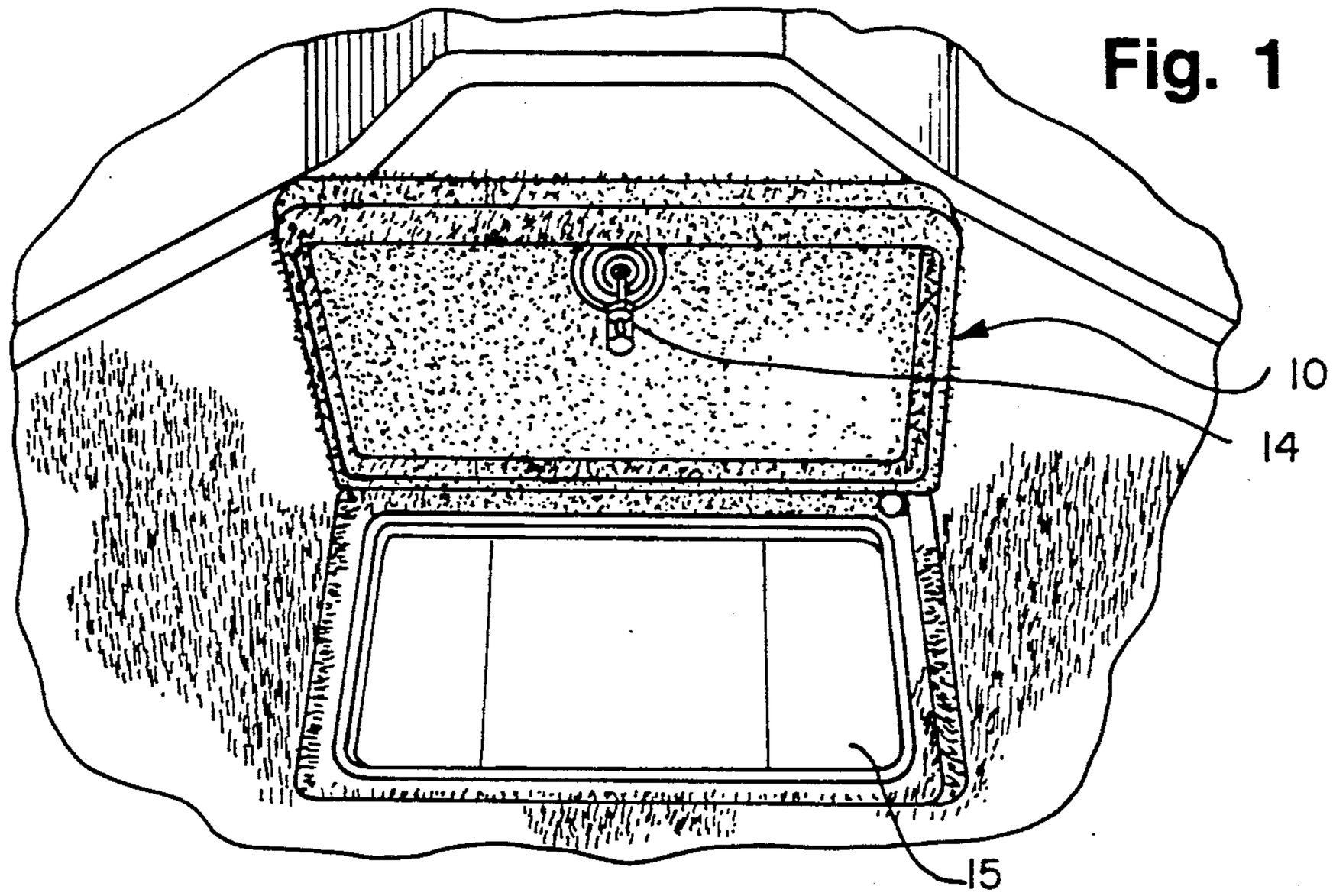


Fig. 1

Fig. 2

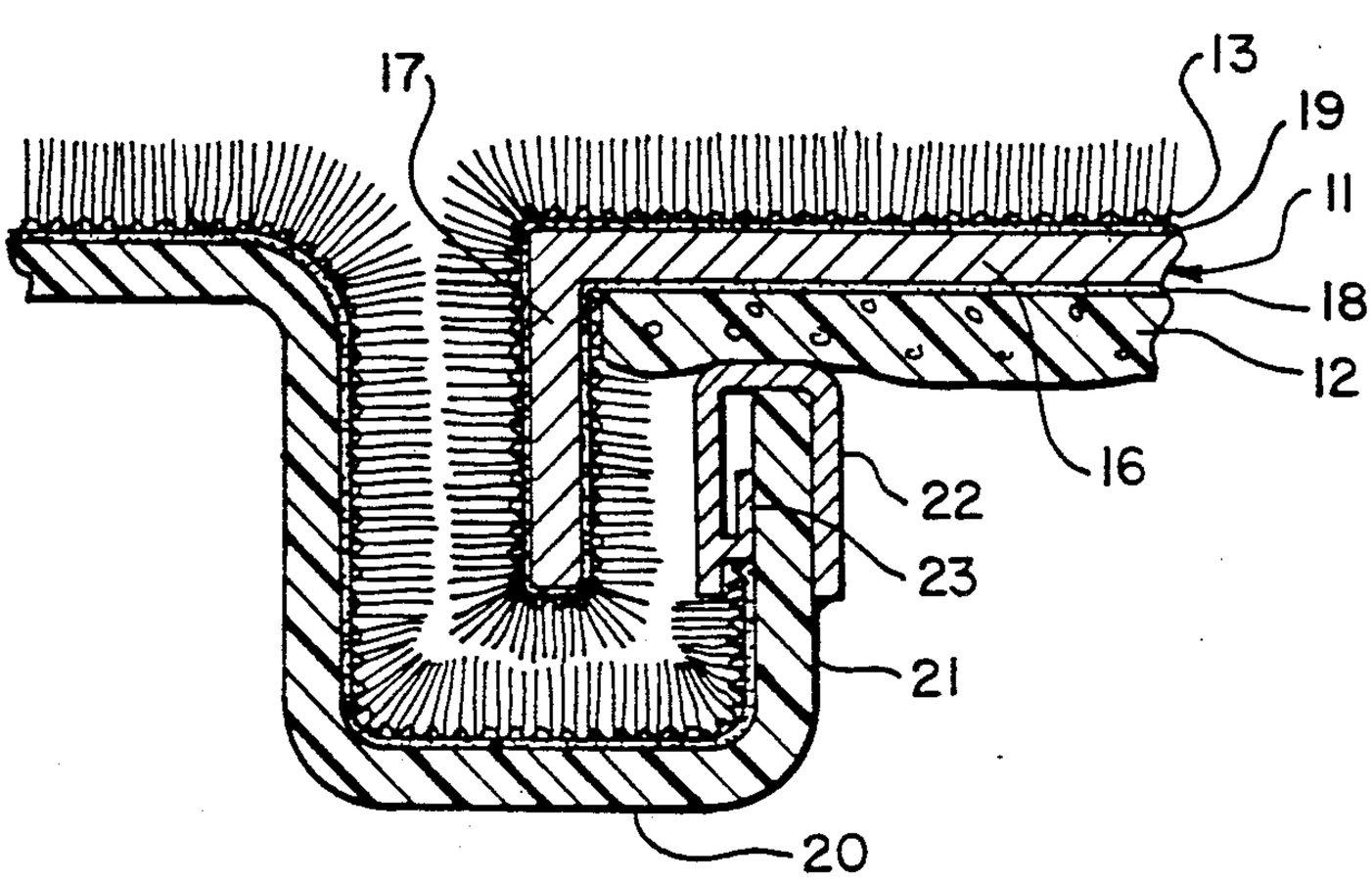


Fig. 3

HATCH COVER

BACKGROUND OF THE INVENTION

1. Field Of The Invention

The present invention relates to a cover for an opening, and more particularly, a hatch cover for closing a hatch in the deck of a boat or ship.

2. Description Of The Prior Art

In many applications, hatch covers should provide the following features:

(a) a rugged construction to withstand the weight of heavy items and individuals;
(b) thermal insulation which reduces moisture condensation on one side of the cover;
(c) a gasket-type seal to reduce the flow of water and air through the opening which the hatch cover closes;
(d) galvonic isolation from mounting hardware;
(e) electric isolation to reduce the risk of arcing from electrical short circuits; and
(f) sound dampening to minimize sound transfer through the opening which the hatch cover closes and to reduce the noise generated by items dropped on the cover or by the closing of the cover.

One application which requires these features is a hatch cover for the deck of a water craft.

The prior art includes a wide variety of covers for closing hatches. However, due to various inherent design characteristics, these prior covers do not provide the features outlined above. They do not provide an effective closure, especially for applications such as the water craft application identified above.

The hatch cover of the present invention provides the above features. It has a simple construction which greatly minimizes the expense of manufacture and assembly while providing the outlined advantages. It comprises a small number of components which provide an effective closure and an attractive addition to the structural member whose opening it closes.

SUMMARY OF THE INVENTION

In accordance with one embodiment of the present invention, a hatch cover includes a rigid, main body member made of metal or any other material of high strength and rigidity. This main body member includes a top portion and a rim portion which lies at an angle to the top portion and extends around its periphery.

The cover also includes a resilient sealing member fixedly secured to the main body member with permanent adhesive or any other suitable securing means. The sealing member engages the portion of the partition or deck surrounding the opening which the cover closes. It extends across the opening and completely closes it.

A protective layer, e.g., all-weather carpeting, fixedly secured to the main body member with permanent adhesive or other suitable means, covers that portion of the main body member surface which the resilient sealing member does not cover. It protects the main body member and provides an attractive finish for the cover. The cover also includes a handle so that a user may easily move it.

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of this invention, one should now refer to the embodiment illustrated in greater detail in the accompanying drawings and described below by way of an example of the invention. In the drawings:

FIG. **1** is a perspective view of the hatch cover of the present invention, showing the cover in an open position over a hatch in a deck of a water craft.

FIG. **2** is a perspective view of the hatch cover, showing the hatch cover in a closed position.

FIG. **3** is a sectional view taken along the line **3—3** in FIG. **2**.

While the following disclosure describes the invention in connection with one embodiment, one should understand that the invention is not limited to this embodiment. Furthermore, one should understand that the drawings are not to scale and that graphic symbols, diagrammatic representations or fragmentary views may, in part, illustrate the embodiment. In certain instances, the disclosure may not include details which are not necessary for an understanding of the present invention.

DETAILED DESCRIPTION OF THE DRAWINGS AND AN EMBODIMENT

Turning now to the drawings, FIGS. **1–3** illustrate one embodiment of the hatch cover of the present invention at **10**. The cover **10** generally includes a main body member **11**, a sealing member **12**, a protective layer **13**, and a handle **14** (See FIGS. **1** and **2**). It closes a hatch **15** defined by the deck of a water craft or any other partition of a structure.

The main body member **11** is a cap-like component made out of a metal such as aluminum or any other material of sufficient strength, rigidity and weight. This member **11** includes a top portion **16** which has a rectangular shape similar to the shape of the hatch **15**. The portion **16** has a width and length slightly greater than that of the hatch so that its end portions extend beyond the hatch. The member **11** also includes a rim portion **17** which extends around the periphery of the top portion and lies perpendicularly to the top portion **16**.

The sealing member **12** is a sheet of resilient material. It has a rectangular shape and a predetermined thickness; and it serves as a moisture barrier, electric insulator, and noise dampener. It is any material which provides these characteristics, e.g., expanded, closed cell polyethylene foam. It has a thickness greater than the thickness of the top portion **16** of the main body member **11** (e.g., 0.090 to 0.125 inches for the top portion compared to 0.25 inches for the sealing member). A permanent adhesive **18** or any other suitable securing means fixedly secures the sealing member **12** to the top portion **16** of the main body member **11** in substantial co-extensive relation with the top portion **16** within the rim portion **17**.

The protective layer **13** lies over that portion of the surface area of the main body member **11** which the sealing member **12** does not cover. A permanent adhesive **19** or any other suitable securing means secures this protective layer **13** to the main body member **11**. The layer **13** is all-weather carpeting or any other material which has characteristics similar to those of the sealing member **12**.

The handle **14** (See FIGS. **1** and **2**) is a pull-out type handle which allows manipulation of the cover, especially removal of the cover **10** from the hatch. When the cover lies in the closed position as shown in FIG. **2**, the handle lies flush with the surface of a cover so that an individual walking on the deck will not trip over it.

The cover **10** shown in FIGS. **1-3** is a cap-like member which stays in place over the hatch under its own weight. Alternatively, hinge members may hingedly connect the cover to the deck. As shown, the rim of the cover extends into a channel **20** which comprises the portion of the deck disposed around the hatch **15**. This channel includes a flange **21** which supports a footing strip **22**.

The strip **22** engages the sealing member **12** and acts as a footing for the cover **10**. In cross-section, it has the shape of an inverted U; and it receives the top of the flange **21** in the space between the two legs of the U. This space has a width greater than the thickness of the flange **21** so that carpeting secured to the deck may also extend between the legs of the strip **22** (See FIG. **3**). The strip includes a finger **23** which engages the side of the flange **21** and facilitates a press fit over the flange **21**.

The rim of the cover **10** lies in overlapping or telescoping relation with the flange **21** as shown in FIG. **3**. Any moisture which collects in the channel **20** will not move through the hatch **15** due to the seal provided by the sealing member **12**. However, the channel **20** may include a drain (not shown) for removing the moisture.

While the above description and the drawings disclose and illustrate one embodiment, one should understand, of course, that the invention is not limited to this embodiment. Those skilled in the art to which the invention pertains may make modifications and other embodiments employing the principles of this invention, particularly upon considering the foregoing teachings. The applicant intends to cover any such modification and other embodiments which incorporate those features which constitute the essential features of this invention.

What is claimed is:

1. A cover for a hatch defined by a structural member with a portion which lies adjacent the hatch, said cover comprising: a rigid main body member; and a sealing member secured to the main body member for engaging the structural member portion adjacent the hatch, said sealing member having a predetermined area to close

the hatch; a protective layer secured to the main body member, the protective layer and the sealing member covering substantially all of the surface of the main body member, said sealing member and protective layer being secured to the main body member with permanent adhesive.

2. The cover of claim **1**, wherein the main body member includes a top portion and a rim portion which extends at an angle to the top portion and lies around the periphery of the top portion.

3. The cover of claim **2**, wherein the top portion is a flat plate with a rectangular configuration and the rim portion extends perpendicularly to it.

4. The cover of claim **3**, wherein the main body member is a one-piece, integrally molded unit made of metal.

5. The cover of claim **2**, wherein the sealing member is substantially co-extensive with the top segment.

6. The cover of claim **5**, wherein the sealing member is made of expanded polyethylene foam.

7. The cover of claim **1**, wherein the protective layer is an all-weather carpet.

8. The cover of claim **1**, further comprising handle means for moving said cover.

9. A cover for a hatch defined by a deck member which includes a collar disposed around the hatch, said cover comprising: a rigid main body member including a top portion and a rim portion which lies in overlapping relation with the collar of the structural member when the cover lies in place over the hatch; a resilient sealing member secured to the main body member for engaging the collar of the deck member, said sealing member being substantially co-extensive with the top portion of the main body member and closing the hatch when the cover lies in place over the hatch; a protective layer secured to the main body member, said protective layer and the sealing member covering substantially all of the surface area of the main body member; and handle means secured to the main body member for moving the cover.

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